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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,568	07/24/2003	Ronald C. Montelaro	I 2000.608 US C1	3285
31846 7590 03/01/2007 INTERVET INC. PATENT DEPARTMENT PO BOX 318 MILLSBORO, DE 19966-0318			EXAMINER LI, BAO Q	
			ART UNIT 1648	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/01/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/627,568

Applicant(s)

MONTELARO ET AL.

Examiner

Bao Qun Li

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-10 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 6, 7, 8, 14-16 are written as claims independently from the rejected claims. is/are allowed.
- 6) ☒ Claim(s) 1,3,5,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>2/9/2007</u> .                           |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                          |

## **DETAILED ACTION**

### ***Response to Amendment***

This is a response to the amendment filed on 12/06/06. Claims 1, 3, 4, 6-7, 10, 14-16 have been amended. Claims 2 and 11-13 have been canceled. Claims 1, 3-10, 14-16 are pending and considered before the examiner.

### ***Declaration***

2. The Declaration filed on Oct. 25, 2005 is insufficient to antedate the 102 (a) or 102(b) or 102 (e) references cited in the previous office action for the reasons stated in the previous office actions.

3. Li, Feng and Craigo, Jodi are still considered as co-inventors of the current application on the recorder because the petition for changing inventorship has not been submitted.

### ***Claim Rejections - 35 USC § 112***

4. Applicant's amendment of claim 1 and argument in pages 5-6 filed on 11/20/06, with respect to 112 2<sup>nd</sup> paragraph rejection have been fully considered and are persuasive. The rejection of 1, 5 and 9 has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Applicant's arguments, see pages 6-8, filed on 11/20/2006, with respect to the rejection(s) of claim(s) 1, 3 and 4 under 102 (b) by Li (A) (J. Vrol. 1998, Vol. 72, No. 10. pp. 8344-8348) or 4 under 102(a) by Li (B) (J. Virol. 2000, Vol. 74, No. 1, pp. 573-579) or under 102(e) by Montelaro et al. (US patent No. 6,528,250) have been fully considered and are persuasive, the rejections have been withdrawn.

### ***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1648

8. Applicant's arguments filed on 11/20/2006, with respect to the rejection(s) Claims 1, 3, 4 under 35 U.S.C. 103(a) as being unpatentable over Li et al. (A) (J. Virol. 1998, Vol. 72, No. 10, pp. 8344-8348) and Lichtenstein et al. (J Virol. 1995, Vol. 69, No. 5, pp. 2881-2888) or over Montelaro et al. US patent NO. 6,461,616B1) or over Li et al. (A) (J. Virol. 1998, Vol. 72, No. 10, pp. 8344-8348) and Kingsman (WO 99/32646 A1) have been fully considered. Applicants assert that none of the reference teaches the mutation is made by the combination of inserting two stop codons with a deleting the S2 gene.

9. The argument has been respectfully considered; however, the argument are moot in view of the new ground rejection although the deletion is made in the different spot of S2 gene rather than anywhere in EIAV genome.

11. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (A) (J. Virol. 1998, Vol. 72, No. 10, pp. 8344-8348) or Li et al. (B) (J. Virol. 2000, Vol. 74, No. 1, pp. 573-579) or Montelaro et al. (A) (US patent NO. 6, 528,250B1).

12. Li et al. (A) (J. Virol. 1998, Vol. 72, No. 10, pp. 8344-8348) or Li et al. (B) (J. Virol. 2000, Vol. 74, No. 1, pp. 573-579) or Montelaro et al. (A) (US patent NO. 6, 528,250B1) teach that a S2 gene mutation that does not influence the envelope protein expression is selected from group consisting of insertions of two redundant stop codons at the positions G5 and G18 or a deletion of first 5 nucleotides can make the S2 gene. These mutations are either same as claims drafted or as obvious choice for any ordinary skill in the art because the prior art clearly teach that such modification does not influence the EIAV replication and envelope protein expression. Therefore, they concluded that the S2 gene is dispensable for the viral replication in vitro.

13. While it is noted that applicants teach that some particular deletions in S2 gene ORF are made that do not overlap with the envelope protein in the 2<sup>nd</sup> ORF of S2 gene and influence the envelope protein expression. However, claims 1, 3-4 are still read on the deletion(s) being made anywhere as prior art has taught.

14. To this context, any person with an ordinary skill in the art would be able to make a mutated EIAV in view of the teaching by the cited prior art, because it is obviously any combination of the mutations taught by the prior art would render the mutated EIAV having the inactivated S2 gene, but still being able to replicate, once the S2 gene is inactivated by the any one approach taught by the cited prior art regardless which combination of mutation is used.

Art Unit: 1648

15 As there are no unexpected results have been provided, hence the claimed invention as a whole is prima facie obvious absence unexpected results.

***Conclusion***

Claims 5-10 and 14-16 are free of rejection; however, they are not in condition for allowance because they depend on the rejected claims.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

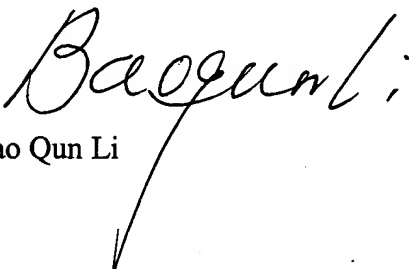
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

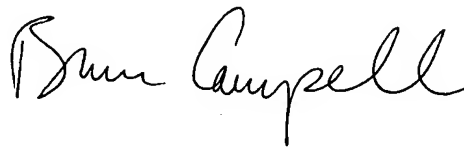
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Qun Li whose telephone number is 571-272-0904. The examiner can normally be reached on 6:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1648

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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